INTERNATIONAL STANDARD

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Third edition
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Implants for surgery — Cardiac pacemakers —

Part 3: Low-profile connectors (IS-1) for implantable pacemakers

Implants chirurgicaux — Stimulateurs cardiaques —

Partie 3: Connecteurs à bas profil (IS-1) pour stimulateurs implantables

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 150, *Implants for surgery*, Subcommittee SC 6, *Active implants*.

This third edition cancels and replaces the second edition (ISO 5841-3:2000), which has been technically revised. It also incorporates the Technical Corrigendum ISO 5841-3:2000/Cor 1:2003.

ISO 5841 consists of the following parts, under the general title *Implants for surgery — Cardiac pacemakers*:

— *Part 2: Reporting of clinical performance of populations of pulse generators or leads*

— *Part 3: Part 3: Low-profile connectors (IS-1) for implantable pacemakers*

Introduction

The development of this part of ISO 5841 was prompted by the concern of clinicians over the variety of apparently similar but incompatible pacing leads of the low-profile in-line type. (Because the major diameter of such leads is 3,2 mm, these connectors were frequently referred to as “3,2 mm” leads.) The purpose of this part of ISO 5841 is to specify a standard connector assembly, IS-1, to allow leads and pulse generators from different manufacturers to be interchangeable. The safety, reliability and function of a particular connector part are the responsibility of the manufacturer.

Annex A gives a test method for lead connector impedance.

Annex B provides a rationale: it is recommended that this annex be read before using this part of ISO 5841 so that the user is informed about its limited objectives.

Implants for surgery — Cardiac pacemakers —

Part 3: Low-profile connectors (IS-1) for implantable pacemakers

WARNING — Do not use the connector cavity specified in this part of ISO 5841 if the implantable pulse generator is capable of introducing dangerous nonpacing signals (e.g. defibrillation signals) through an IS-1 connector (see 4.3.3).

1 Scope

This part of ISO 5841 specifies a connector assembly to be used to connect implantable pacemaker leads to implantable pacemaker pulse generators. Essential dimensions and performance requirements related to connector fit are specified, together with appropriate test methods.

Other connector features such as fastening means and materials are not specified in this part of ISO 5841. This part of ISO 5841 is applicable only to the form and fit of the connector assembly, and does not address all aspects of functional compatibility, system performance or reliability of different leads and pulse generator assemblies.

This part of ISO 5841 supplements ISO 14708-2 only for those pacemaker components which are claimed by their labelling to be fitted with an IS-1 connector assembly part. It does not replace any requirements in ISO 14708-2.

NOTE Pacemaker connector assemblies not complying with this part of ISO 5841 may be safe and reliable and may have clinical advantages.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14708-2, *Implants for surgery — Active implantable medical devices — Part 2: Cardiac pacemakers*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14708-2 and the following apply.

3.1
connector assembly
assembly consisting of a lead connector and a connector cavity for the electrical and mechanical connection of a lead to a pulse generator

3.2
lead connector
that part of the connector assembly attached to a lead

Note 1 to entry: See Figure 1.

